



Québec

Fertile Ground for Geomatics

Geomatics is a relatively new discipline that combines information technology and earth sciences. It is basically an up-to-date form of geography! Previously the preserve of specialists, today it is open to many users in various economic, environmental and social sectors, and to any individual with Internet access.

Over the past 20 years, Québec has experienced something of a geomatics boom, no doubt related to the fact that the province's landmass totals close to 1.7 million km²! The sheer number of elements that must be managed in such a large area has led to the development of geomatics applications to organize geographical knowledge about the land and its natural resources. The new management practices derived from these applications have put Québec on the map when it comes to geomatics.

From knowledge to governance

For the Québec Government, geomatics is an indispensable knowledge and management tool. It was first used by government departments and agencies that dealt with natural resources, transportation, agriculture, and the environment, as well as land development and management. Today geomatics applications are used in many other fields, including civil security, health, education and tourism.



Whether for agriculture, forestry, mines, energy, wildlife, environment, heritage, construction, or urban and regional zoning, dedicated geographic information systems (GISs) are used in management at the provincial, regional, and local levels. They include:

- the Base de données topographiques du Québec (Québec topographic database)
- the Système d'information et de gestion du territoire public (public land management and information system)
- the Base de données cadastrales du Québec (Québec cadastral database)
- the Système d'information écoforestière (ecoforestry information system)
- the Base géographique routière (geographic road information database)
- the Système d'information géominière (geo-mining information system)
- the Système géomatique de la gouvernance de l'eau (geomatic water governance system)
- the Banque de données satellites du Québec (Québec satellite database)

These geographic information systems provide a steady source of reliable, up-to-date data, and they contribute to the governance of Québec with respect to the province's social, environmental and economic development. Québec has opted for the integrated management of its land and resources in keeping with the principles of sustainable development. The GISs that have been integrated into governance activities act as catalysts and lead to greater efficiency in emergency situations, land and resource management and development, socioeconomic development, etc.

The Québec Government has helped the geomatics sector develop as a tool to support various organizational missions by setting up a government-wide coordination and cooperation structure that promotes networking and partnerships in the gathering, production and distribution of

geographic information and the creation of shared assets. The same structure facilitates transfers of expertise from one organization to another.

Skills partnerships

In addition to training a qualified workforce, Québec's teaching and research institutions play an important role in developing disciplines related to land and natural resource management.

The reputation of Québec's institutions of higher learning is a tremendous boon for geomatics in the province. To support industries and governments, Québec has a large number of researchers affiliated with universities, institutes and colleges.

Québec businesses cater for every aspect of geomatics: cartography, geodesy, surveying, photogrammetry, topometry and remote sensing. They offer a broad range of services, including consulting, data processing, sales and support, and geographic data acquisition for both traditional and emerging markets. They serve all of the province's regions, as well as the Québec Government, and are active in many different countries. Québec has become a go-to partner for countries wishing to develop their geomatics know-how.

A network of partners comprising the Québec Government, private enterprise, and teaching and research institutions has been set up to export Québec's geomatics know-how. Foreign governments can now obtain whatever geomatics expertise they require with respect to land management and development. Québec has garnered a strong international reputation by proposing integrated geomatics services that go above and beyond the individual contributions of these three partners.